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RESILIENCE AND VULNERABILITY FACTORS IN THE COURSE OF ADAPTATION TO TRAUMA

Rachel Yehuda, Ph.D.

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Only recently has the field of traumatic stress begun to consider resilience and vulnerability – and particularly the latter – as relevant to understanding the course of adaptation to trauma. Given the substantial number of trauma survivors who either do not develop, or recover from PTSD, knowledge of these factors appears to be essential in understanding the nature and treatment of this disorder. Clinicians have been eager to discuss resilience to trauma and to elucidate the coping behaviors that lead to restitution of symptoms, or to adaptation to trauma. Certainly, many specialized PTSD treatments involve training trauma survivors to use coping skills to better manage their reactions to traumatic reminders.

Talking about vulnerability to PTSD, however, is quite another matter, and is still approached with ambivalence in many clinical and academic circles. Many involved in treating trauma survivors feel that discussions of vulnerability to PTSD may betray their clients by implying that their symptoms are not a result of the events that they may have experienced, but rather, an underlying constitutional weakness. Talking about vulnerability factors in a post-DSM era smacks of the now unpopular concept of neurosis and potentially endangers the concept of PTSD by de-emphasizing the role of the traumatic event in the etiology of this disorder. As the notion of vulnerability to PTSD does tend to contradict one of the original tenets on which the diagnosis was based – that symptoms are solely a result of trauma exposure – it is important to approach this idea with caution.

On the other hand, a failure to consider vulnerability factors in the development of PTSD may ultimately impede clinical treatment of the trauma survivor. Although clinicians may feel an obligation to uphold the original ideology on which PTSD was developed, to the extent that vulnerability factors are important, this may deprive the patient who is treated using a more limited therapeutic intervention than that might otherwise be applied if vulnerability factors were considered. Fortunately, the clinician no longer has to choose between the political correctness of ignoring vulnerability and the clinical appropriateness of embracing it, because contemporary knowledge about vulnerability has been incorporated into a new ideology of PTSD as reflected in the DSM-IV. Indeed, the DSM-IV conception of PTSD has moved away from some of the original formulations of this disorder in the direction of embracing the idea of individual differences in stress responsiveness.

Historic Reluctance to Consider the Role of Vulnerability in Traumatic Stress Responses

The diagnosis of PTSD was established in order to describe the enduring psychological consequences following exposure to traumatic events (for a more comprehensive review of the conceptual history of PTSD see 1). An important consideration in developing this diagnosis was the need to differentiate between the transient consequences associated with chronic or everyday stress such as divorce, job loss, coping with chronic illness or occupational stress, and the persistent and more debilitating effects of overwhelming, potentially life-threatening stress such as rape, torture and war. Although it was known that exposure to chronic, but non-life threatening stress could be associated with severe health consequences, it was also felt that the adverse effects would dissipate when the stressors were no longer present. In contrast, the traumatic stress response, as conceptualized by the diagnosis of PTSD, described adverse effects that continued long after the event had passed.

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Another difference between chronic and traumatic stress was that the effects of the former develop slowly over time, whereas traumatic stress reactions are sudden. In chronic, non-traumatic stress the body is not overwhelmed by a great moment of physiologic upheaval, but rather,

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FROM THE EDITOR...

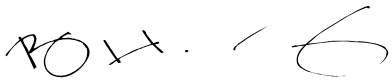
This issue of the Quarterly we are pleased to present a range of articles discussing the role of pre-disposing factors in the development of PTSD, the challenge of measuring treatment outcomes, and treatment for veterans with PTSD and psychosis. This issue also marks a change in our editorial staff.

For many years, the examination of predisposing factors as determinants of PTSD was controversial, i.e., many held the conviction that it was unnecessary to look at associated risk factors beyond the temporal frame of the traumatic event. When the disorder was formally recognized in 1980, the validity of the PTSD construct rested largely on the data provided by patient self-reports. Today, there is added empirical biological evidence supporting PTSD as a diagnostic entity. "The biologic validation of PTSD" asserts Rachel Yehuda in her article discussing resilience and vulnerability factors, "has offered the field an opportunity to grapple with the issues of vulnerability without endangering the initially fragile construct of PTSD."

Demonstrating that positive change can occur in the course of treating chronic PTSD is often challenging to administrators and clinicians. The biopsychosocial sequalae associated with PTSD suggest that multimodal measurements are necessary. In the article "Therapeutic Follow-Up," Barbara Niles, Elana Newman, and Lisa Fisher discuss the complexities involved in measuring the course of PTSD and underscore the need for utilizing multiple measurement techniques across time. This issue also features a look at treatment of PTSD when psychotic features are also present. Madeline Uddo, Frederick Sautter, and Larry Pardue describe a treatment model and present their research findings related to a clinical domain not often addressed in the literature.

For the last four years, Marylene Cloitre and Dudley Blake have generously donated their time and skills to the publication efforts of the Quarterly. Dr. Cloitre has overseen the Women's Column since its inception, contributing many of the thoughtful columns herself. As Associate Editor, Dr.. Blake's ability to further sharpen even the sharpest of writings greatly served the efforts to transition from a newsletter to a more academic and clinically oriented publication. To both Dr. Cloitre and Dr. Blake, thank you. In their place, we welcome Marie Caulfield, Annabel Prins, Gregory Leskin and Eve Carlson to the Clincial Quarterly staff. Drs. Caulfield and Prins will be overseeing the column "Women and Trauma" and Drs. Leskin and Carlson have become our new Associate Editors. We look forward to the unique perspective each of these skilled research/clinicians/writers bring to our publication.

Lastly, we are happy to announce that past issues of the Clinical Quarterly have been posted on our NC-PTSD Webpage. Volume 7(4) appears in its original published format. Plans are underway to post each of the previous articles. At this point, a select number of "text only" articles are posted from Volumes 1-7. Please visit our webpage:http://www.dartmouth.edu/dms/ptsd/.



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National Center for Post-Traumatic Stress Disorder

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suffers from the gradual erosion of physiologic systems that render the individual vulnerable to a host of physical and psychological illnesses. Chronic stress is associated with feeling overwhelmed. Traumatic stress results, quite specifically, in a fear response (which might also feel overwhelming). In PTSD, the "damage" done to the individual is thought to occur as a result of activating fear centers in the brain which initiate a cascade of biological and psychological responses (2, 3). Given the differences between chronic and traumatic stressors, it should not be surprising that biologic studies of the hormonal systems involved in stress responses have revealed very distinct neuroendocrine profiles for chronic stress and the traumatic stress response associated with PTSD (4).

In addition to differentiating between the effects of non-traumatic and traumatic stress, the diagnosis of PTSD also offered an opportunity for a more universal description of the response to trauma. Prior to the establishment of the diagnosis of PTSD, "syndromes," "war neurosis, " and "battered wife syndrome" described symptoms associated with each of these distinct events. The idea behind PTSD was that once a certain threshold of severity was reached, symptoms were not dependent on the nature of the specific event that occurred. Thus, the diagnosis of PTSD represented an attempt to define symptoms common to all trauma survivors. The major assumption behind the diagnosis was that the symptoms occurred because of the exposure to the traumatic stress. Implicit in this idea was the presumption that most individuals who experienced traumatic events would develop symptoms regardless of any pre-traumatic considerations. To assume that explanations other than trauma severity might be involved in producing the chronic aftermath of PTSD was to blame the victim for their legitimate reactions to experiences that befell them. Furthermore, because of the political difficulties in establishing the diagnoses, there may have been an unwitting feeling that talking about vulnerability in the early phases of the disorder – before it was fully accepted in mental health as a legitimate diagnostic entity—might endanger the concept of PTSD and quite possible lead to its disappearance. Thus began a virtual taboo against discussion issues relating to vulnerability.

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Influence of Scientific Findings on Vulnerability Models for PTSD

At the time the diagnosis was established no one knew the prevalence of either trauma exposure or PTSD. One of the major observations from epidemiological studies was that exposure to horrible, life-threatening events was disturbingly common among people. The most recent epidemiological study estimated that about 90% of citizens in the United States are exposed to at least one traumatic event as defined by the DSM-IV in the course of their lives (5). Many individuals are exposed to more than one traumatic event in their lives (6). However only about 14% — 18% of all women and 10% of all men in the United States – develop PTSD in response to these events (5). It is interesting to speculate how this knowledge might have affected formulations of PTSD in the DSM.

DSM-IV dealt with the epidemiological data by adding the clause to Criterion A that the traumatic event must be accompanied by the subjective response of "fear, helplessness, or horror." This clause provided an acknowledgement that there is diversity in the responses to traumatic events. Indeed, subjective responses to a given event could not be assumed. The stipulation in DSM-IV that individuals must experience a subjective response to an event now makes the study of risk factors necessary rather than inappropriate. Furthermore, the implication of vulnerability or risk factors for PTSD is not nearly as threatening to the conception of PTSD in the mid and late – 90's as it might have been in the early 80's due to the proliferation of biologic studies in PTSD. During the time that elapsed between DSM and DSM-IV, numerous biologic studies have provided important validation for the disorder of PTSD. In particular, the findings of neuroendocrine studies have demonstrated that the hormonal basis of PTSD is distinct from that of chronic stress and other psychiatric disorders. The biologic validation of PTSD has offered the field an opportunity to grapple with issues of vulnerability without endangering the initially fragile construct of PTSD.

"Political Correctness" of Vulnerability Models of PTSD

One of the most salient predictors of PTSD appears to be the severity of the traumatic event. The DSM had initially hoped to unite the experience of trauma under one set of symptoms. This implied that traumatic vs. non-traumatic stress might best be considered dichotomous. However, empirical research demonstrated that traumatic events could be considered as existing on a continuum. Not surprisingly, events such as torture or prolonged victimization are associated with the highest estimates for chronic PTSD. The prevalence of chronic PTSD among prisoners of war and concentration camp survivors is about 50% (7, 8). In contrast, the prevalence rate of chronic PTSD in survivors of natural disasters is about 4% (9). The dose-response relationship between severity of the trauma and the subsequent development of PTSD suggests that vulnerability factors may be particularly important as one moves down along the spectrum of horror and catastrophe. For example, because there is a qualitative difference between being subjected to purposeful torture vs. motor vehicle accident – even though both experiences may be associated with life threat, and physical and psychological injury – vulnerability factors may be more prominent in the case of a PTSD in response to the latter trauma. One strategy for studying risk factors in the development of PTSD might be to compare vulnerability factors in those experiencing high magnitude responses to moderately severe to extremely severe traumatic events.

Prior victimization, particularly victimization in childhood, has been found to be potent risk factor for the development of PTSD following rape (10). Exposure to untoward events early in life might also explain the development of other risks that have been identified, such as those relating to personality characteristics and a history of psychological or behavioral problems. Persons with avoidant or antisocial personalities prior to the traumatic event have increased risk for the development of PTSD (11), as do those with a history of conduct disorder in childhood, and those with lower intelligence. However, to a certain extent, these characteristics might also reflect adverse

early life experiences. It is easy to see, for example, how abuse early in life might lead to avoidance, sociopathy, conduct disorder and lower intelligence as a reflection of (pre-) trauma-related cognitive impairments.

Other risk factors for PTSD have emphasized a possible role for a genetic diathesis towards PTSD. True and colleagues demonstrated a greater prevalence of PTSD in the co-twin of monozygotic trauma survivors who had a twin with PTSD compared with dyzygotic twins of whom one twin had already developed PTSD (12). These findings imply that the increased prevalence in monozygotic twins is due to shared genes. Along these lines Davidson et al demonstrated that trauma survivors with PTSD were more likely to have parents and first-degree relatives with mood, anxiety, and substance abuse disorders compared with trauma survivors who did not develop PTSD (13). Our work has demonstrated that parental PTSD might be a powerful risk factor for PTSD because children of Holocaust survivors are more likely to develop PTSD in response to traumatic events compared to a demographically-matched sample whose parents were not Holocaust survivors (14).

The extent which any of these findings are indicative of truly "biological" or "genetic" phenomena, as opposed to environmental ones, is not yet clear because the vulnerability for PTSD in a trauma survivor who has lived with a chronically, mentally ill family member may reflect either genetics, experience, or some combination. For example, children of Holocaust survivors report feeling chronically stressed by hearing stories about the Holocaust, having to experience their parents suffer chronic pain or having to care for their disabled parents, feeling burdened by expectations of their parents, or experiencing losses (like not having extended families or even grandparents) as a result of the Holocaust. Thus, the increased prevalence of PTSD in this group may reflect vulnerability owing to experiential factors. Even if the diathesis were somehow "biologically transmitted" to the children, the diathesis is still a consequence of the traumatic stress in the parent. Thus, even the most biologic of explanations for vulnerability must at some point deal with the fact that a traumatic event has occurred. Therefore, rather than shifting the focus away from the effects of the focal traumatic event, risk factors justify why the effects of traumatic stress may be particularly devastating and long-lasting for a strong contingency of trauma survivors.

Lessons from a High-Risk Group

For the last several years, our group at the Traumatic Stress Studies Program at Mount Sinai School of Medicine and the Bronx VA have been studying children of Holocaust survivors. Initially we were intrigued by the fact that adult children of Holocaust survivors appeared to have an elevated risk for the development of PTSD following traumatic events (15). Furthermore, our data suggested that the "risk factor" for these individuals was the presence of PTSD in the parent. In one study we noted that PTSD in children of Holocaust survivors was only present if the parent had PTSD, but not if the survivor parent did not have chronic PTSD (16). Interestingly, many of the adult children of Holocaust survivors seemed to show evidence of low urinary cortisol excretion – similar to what our group has described in chronic PTSD (17).

However, in addition to having a greater likelihood of developing PTSD in response to life-threatening events (DSM-IV defined), adult children of Holocaust survivors also appeared to develop PTSD symptoms in response to events that the DSM-IV would not consider traumatic, but that nonetheless, are extremely stressful, such as divorce, death in the family, and other forms of separation (death of a therapist, loss of a caretaker such as a nanny). Adult children were more likely to claim that these events were more subjectively stressful to them than DSM-IV traumatic events such as motor vehicle accidents, natural disasters, or combat-related experiences. Interestingly, our preliminary data appear to suggest that cortisol levels are just as low in offspring that indicate being "traumatized" (i.e., developing PTSD symptoms) by a non-DSM-IV event as they are by a DSM-IV traumatic event. [14]

The data on the adult children of Holocaust survivors provide an important insight into the relationship between vulnerability and stressor severity. It may be that the development of PTSD following less intense stressors is associated with greater individual vulnerability. The logical extension of this argument is that "sub-threshold" traumatic events – that is, events that might be considered too weak to produce PTSD according to current DSM-IV definitions that include, for example, potential life-threat – may produce PTSD-like syndromes in individuals who are at increasing risk for the development of PTSD. Patients/clients exhibiting "exaggerated" responses to environmental events may not be exaggerating their pain, but rather may also be expressing symptoms associated with pretraumatic vulnerability. Considerable care should be taken to discuss possible pretraumatic stressful events or other areas that might uncover vulnerability or risk. Dealing with the multiplicity of factors that contribute to the response to an event, and shoring up existing coping behaviors, might be particularly fruitful for those who seem unduly burdened by traumatic events.

Vulnerability vs. Resilience

Although not all trauma survivors develop PTSD following exposure to trauma, it is important to highlight recent prospective, longitudinal studies which indicate that trauma survivors are just as likely to develop other psychiatric disorders such as panic disorder and depression post-trauma. Thus, PTSD is one type of response to trauma, but exposure to trauma may be associated with many different types of outcomes, including, not developing a psychiatric disorder.

But what about people who don't develop PTSD or any other psychiatric disorder? Is it appropriate to consider those who do not develop any psychiatric disorder – the less vulnerable trauma survivors – stress-resistant? Perhaps yes. However, it seems clear that resistance may be a characteristic that is malleable by traumatic experience. It is certainly easy to see how an invulnerable individual may escape the fate of posttraumatic symptoms the first and or even second time a traumatic event occurs. But it may be that repeated exposure to stress causes an erosion of resilience. Rather than considering the dichotomy between resilience and vulnerability, it would be informative to consider the relationship between these two constructs.

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THERAPEUTIC FOLLOW-UP IN CHRONIC PTSD: THE CHALLENGES OF MEASUREMENT

Barbara L. Niles, Ph.D., Elana Newman, Ph.D., and Lisa M. Fisher, Ph.D.

Demands on health care providers to demonstrate effective treatment has led to recent emphasis on psychometric instruments designed to quantify improvements in mental health patients. However, the symptomatology accompanying chronic, combat-related PTSD is extremely complex and it is difficult to identify or target specific symptoms with which to measure change. Determining what, how, and when to measure has been a great challenge in research on chronic PTSD (e.g., 1, 2).


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What To Measure

It seems self-evident that the diagnosis of PTSD would be a central feature of research on the course of PTSD. However, determining that an individual does or does not experience symptoms of sufficient severity to meet diagnostic criteria is often not meaningful in chronic PTSD. In severe cases, a PTSD diagnosis may be maintained even when symptoms abate substantially. In less severe cases, an individual's symptom levels may hover around diagnostic cutoffs, falling below at one point and above at another. In these cases, use of a dichotomous diagnosis variable to represent PTSD can allow minor fluctuations in symptoms to appear greater than they really are.

Measuring the number and severity of PTSD symptoms and how they fluctuate over time allows for a more sensitive examination of changes. However, even when the units of measurement are quite refined, PTSD symptoms may not change substantially in the chronic phase of this disorder (2, 3). Comorbid psychopathology, related symptomatology, and quality of life assessment may provide better information about change. Comorbid disorders, especially depression and substance abuse, are pervasive in the veteran PTSD population (4-6) and should be assessed to illustrate a full picture of symptomatology. As will be illustrated below in the case of Mr. Z, it can be very challenging to determine the relative importance of various symptoms when an individual presents a mottled pattern of strengths and difficulties.

Assessment of the event or events that make up Criterion A for a PTSD diagnosis is also often very complicated. When individuals have experienced multiple potentially traumatic events, it can be difficult to decide which or how many of them contribute to the post-trauma symptomatology. For example, in the case of combat-related PTSD, warzone experiences are considered the "index events," yet many veterans suffered traumatic experiences both before and subsequent to their military traumas. These additional experiences are likely to have contributed to current symptomatology, yet it can be difficult or impossible to determine their relative influence on current functioning. In addition, the relative importance of several Criterion A events may change over time: a person may be bothered by intrusive memories of a certain event for a period of time, while at another time, a different event may be most salient and intrusive.

How To Measure

As with other psychiatric disorders, the most common method of gathering information about PTSD is to ask the individual about his or her symptoms. This can be done using pencil-and-paper self-report checklists or structured interviews. Family members' ratings of symptoms provide additional useful information which can be compared to the ratings provided by the individual under study. Assessment of physiological reactivity to trauma-related stimuli is also a good source of data. Advantages and drawbacks of each of these methods are briefly discussed below.

Self-report scales. Several valid and reliable self-report checklists have been developed to assess PTSD symptoms, and some assess related symptomatology as well. For example, in the case of Mr. Z, the 35-item Mississippi Scale for Combat-Related PTSD (7), the PTSD subscales (8, 9) of the Minnesota Multiphasic Personality Inventory (MMPI; 10), and the MMPI-2 (11) were used to assess symptoms. These scales have been widely-used in the assessment of combat-related PTSD and have performed as well as self-report measures of the disorder (12, 13).

An advantage of self-report assessment measures is that they are cost-efficient and do not require clinician time for administration. In addition, the ratings are not influenced by potential clinical bias. However, an important shortcoming of these instruments is that scores of PTSD severity do not indicate if the information provided is accurate. An individual may exaggerate or underestimate ratings, misunderstand the questions, or respond randomly on the questionnaire. The MMPI-2 (11) has some useful validity scales that can alert clinicians to several of these issues (e.g. 14-15). Even when the information provided by these scales is considered, however, it is often not possible to clearly understand the various potential factors that may influence the individual's reporting style.

Assessment interviews. Clinician-administered structured or semi-structured interviews have also been widely used for assessment. Two commonly-used instruments of this type, the Structured Clinical Interview for DSM-III-R diagnosis (16) and the Clinician-Administered PTSD Scale (17), were used in the assessment of Mr. Z. In such an interview, a clinician can ensure that all symptomatology is reviewed in detail while also allowing interviewees to describe their symptoms in their own words (18). The clinician can use both verbal and nonverbal information to evaluate whether the interviewee understands the questions or is responding randomly and can guide the interview accordingly. In addition, a skilled clinician can often detect when an interviewee is overstating or understating symptoms. However, clinician judgment can also be biased or inaccurate.

Collateral reports. Reports from partners, family members, or friends can also provide valuable data in clinical assessment. Collateral assessment of PTSD can bypass some of the obstacles to accurate self-reporting, such as denial, reading comprehension problems, avoidance, or amnesia. However, collateral information is often not accessible to the assessor: when it is, it is also subject to influence from biases and response sets.

Psychophyisological assessment. Measurement of physiological reactivity to exposure to cues of the traumatic event can offer important additional information in a comprehensive assessment. Substantial increases in heart rate, blood pressure, muscle tension, and skin conductance in response to cues are evidence of increased physiological reactivity and can confirm a diagnosis of PTSD. These measures do not rely on either self-report or clinician judgment, and therefore the impact of response sets or biases is minimized. However, psychophsiological reactivity is considered an indicator of PTSD, not a definitive measure. These assessments have good specificity, but the sensitivity is low (19). Reactivity can be influenced by many outside factors, such as psychotropic and antihypertensive medications. In addition, in many outpatient settings, the resources necessary for such assessments are not available.

All of the measures described above can provide meaningful information in an assessment, but each has some degree of error. The importance of combining data derived from self-report interviews, structured clinical interviews, and, when possible, psychophysiological assessment and collateral reports into a comprehensive mulitmodal assessment has been greatly emphasized in the literature on evaluation of PTSD (e.g., 20-23). When multiple measures are used, the strengths of some can compensate for the shortcomings of others.

When To Measure

Clinical observations and a limited number of empirical studies have demonstrated that chronic PTSD is both persistent and fluctuating. The striking persistence of PTSD symptoms has been widely discussed in clinical literature, particularly with regard to combat veterans, in descriptive accounts (e.g., 24-25), and in the emerging treatment outcome literature (e.g., 2, 26). In the comprehensive National Vietnam Veterans' Readjustment Study (NVVRS; 12), about half of the Vietnam veterans who ever met diagnostic criteria for PTSD were also diagnosed with this disorder when they were assessed in the late 1980's. The remarkable chronic nature and severity of PTSD in Vietnam veterans seeking inpatient VA PTSD treatment has led Shalev (2) to suggest that long-standing combat-related PTSD in Vietnam veterans may be "treatment resistant" in many cases. In all, these findings support the conceptualization of PTSD as a chronic, unremitting disorder.

However, there is also compelling evidence for fluctuation in symptoms of PTSD. The other half of the veterans in the NVVRS who were diagnosed as having had PTSD in their lifetimes reported that their PTSD symptoms had decreased enough so that full diagnostic criteria for PTSD were no longer met (12), suggesting that at least some symptoms remit over time.

Measuring the number and severity of PTSD symptoms and how they fluctuate over time allows for a more sensitive examination of changes. However, even when the units of measurement are quite refined, PTSD symptoms may not change substantially in the chronic phase of this disorder.

Other research has indicated that PTSD symptoms in combat veterans can be reactivated after periods of relative dormancy. Life stressors, such as retirement, death of a parent, or children leaving home, have precipitated PTSD symptoms in World War II combat veterans (25). Visits to war memorials and other public ceremonies that were reminders of combat have been reported to exacerbate symptomatology in Vietnam veterans (26). Solomon (27) described the ways that the 1982 Lebanon War reactivated symptoms in Israeli combat veterans of the 1973 Yom Kippur War. Because the little we know about the course of chronic PTSD indicates that it fluctuates, persists, and can be reactivated, it is unclear when to measure so that substantive changes over time can be detected.

A Case Study: Mr. Z

Case studies can provide a fund of information about the course of PTSD, what influences it, and the ways in which people change. Detailed analyses of individual cases can illustrate the challenges to accurate assessment of changes in chronic PTSD and guide us in determining methods of evaluation that will adequately represent how and why people change.

Mr. Z is one of the veterans who took part in a follow-up study of Vietnam veterans who were evaluated in the late 1980's at the Boston VA PTSD clinic. He sought treatment and received an extensive multimodal evaluation for combat-related PTSD in 1988 (Time One). He was recontacted six years later (Time Two) and agreed to participate in a follow-up evaluation for research purposes.

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Time One

Mr. Z was initially referred for a PTSD evaluation from the inpatient substance abuse unit where he was being treated for heroin addiction. He completed the seven sessions of the time one evaluation as an outpatient and pursued further therapeutic services at its completion. At the time one evaluation, a thorough history was taken, diagnostic interviews were done, and Mr. Z completed self-report measures.

History. Mr. Z grew up as the third of five children in an Irish-American family where both parents worked as laborers in a large company. He described his home life as generally chaotic, with extensive physical abuse by his father that occasionally resulted in hospitalizations due to injuries. His mother was an alcoholic and was generally unavailable to the children. Mr. Z acted as a protector for his younger siblings, especially after his older brother enlisted in the Marine Corps in order to get out of the home.

Despite the situation at home, Mr. Z showed impressive resiliency. He did well in school until high school, when he began working regularly to help support the family. The distractions of work caused his grades to drop, and he was required to repeat grade 12. However he reported that he felt good about his ability to work and about his success in helping to provide for his family. He reported good relations with peers and was active in sports and other activities as much as his work schedule would allow. He had no legal infractions. There were some signs of difficulty, however: Mr. Z began to use alcohol extensively, up to 12 beers per week-end night, just before he entered the military.

Just after completing high school, Mr. Z enlisted in the Marine Corps, following his older brother's footsteps. Mr. Z was sent to Vietnam for one 13-month tour. He served as a helicopter door gunner in a unit that performed extractions of soldiers in the field, assaults on the enemy, and defoliation of jungle areas through spraying of Agent Orange.

Harrowing combat experiences were frequent during Mr. Z's tour. For example, he reported being shot down and then rescued by other helicopters on several occasions, and he recounted that his gun jammed while in the midst of fire fights with the enemy. He also reported that he felt pride in his ability to perform his duties well under these circumstances. Between these missions, while stationed at a secure fire base, Mr. Z had a fair amount of leisure time and was able to use alcohol and intravenous opium extensively without significantly compromising his or his unit's safety.

After discharge, Mr. Z continued to use drugs extensively and became addicted to heroin. In order to support his habit, he became involved in selling drugs. He also worked at various jobs as a construction laborer, but was never able to hold any job for more than a few months because of his substance use problems. He was convicted of various legal infractions related to drug-selling and possession, and served a few short prison sentences totaling about two years. Throughout the 1970's and up until his time one evaluation, Mr. Z was firmly entrenched in the "drug world." His friends, girlfriends, and family members were all heavy substance users.

Diagnoses and symptomatology. As Table One indicates, Mr. Z did not meet diagnostic criteria for PTSD at Time One as assessed by structured interview (SCID). Although he clearly met Criterion A (exposure to a recognizable stressor), he did not have sufficient re-

Table 1

VARIABLE	TIME ONE	TIME TWO
PTSD Diagnosis	no	yes
Comorbid Axis I Diagnoses	polysubstance dependence	alcohol dependence, mild
Mississippi Scale	94	73
MMPI-2 PK scale	13	16
Combat Exposure Scale (CES)	23	20
Violent Behaviors/ Past Year	1	0
Fear of losing control (1-5 scale)	3.5	1

experiencing symptoms to meet Criterion B. He reported occasional thoughts and dreams about his Vietnam experiences, but reportedthat he did not find these recollections to be upsetting. He did meet Criterion C (numbing and avoidance) as he felt emotionally numb and had a sense of foreshortened future, but it was unclear if this disinterest in relationships and activities was related more to his substance use or to his traumatic war experiences. It was difficult for the assessing clinician to distinguish because at time one he reported that he cared about little else besides getting high. He also reported some Criterion D arousal symptoms at time one, but he medicated these with drug use, so it was difficult to discern their intensity and severity.

In terms of comorbid disorders, Mr. Z was diagnosed with polysubstance abuse, but was not suffering from depression. Violent behavior over the past year was assessed by clinician questioning. Mr. Z reported few episodes of violent behavior, but reported concern about his ability to maintain control when angered.

Psychometric measures. Both the Mississippi Scale and the MMPI subscale fall below established cut-offs for PTSD. This is consistent with interview data suggesting that he did not meet criteria for PTSD. The combat exposure scale (CES) indicates moderate exposure to combat. The Beck Depression Inventory (BDI) provides another indicator that he was not suffering from depression at Time One.

Time Two

History. The striking change for this veteran was that he stopped using illegal drugs and extracted himself from drug-using and selling "scene." Mr. Z reported that he had a few slips and one major relapse to using heroin since his Time One evaluation, but at his Time Two evaluation he had abstained from heroin for more than four years. In terms of occupational and interpersonal functioning, things had improved substantially since the first evaluation. He was self-employed and working full-time and reported a positive relationship with his girlfriend of several years with whom he lived.

Mr. Z attributed his success to lessons learned during the year of PTSD-focused individual therapy that followed his Time One

evaluation. Specifically, he reported that he learned to confront rather than avoid problems in general, and to confront distressing memories of traumatic life events in particular. He learned to face his problems, rather than attempting to escape from them by using drugs. He did continue to use alcohol, drinking three to six beers per night, but this was a large reduction from his former levels of use. Mr. Z reported feeling in more control of violent impulses and reported no violent behaviors in the past year.

Diagnoses and symptomatology. At Time Two, the CAPS structured interview indicated that Mr. Z met diagnostic criteria for PTSD. His intrusive thoughts and dreams were frequent and upsetting to him, so he clearly met Criterion B. His avoidance and numbing was more clearly trauma-related (as opposed to drug-related), so he also met Criterion C. And his physiological reactivity was of sufficient frequency and intensity to meet Criterion D. His polysubstance abuse was in remission, although he did meet diagnosis for mild alcohol dependence.

Mr. Z described that every year he experienced an "anniversary reaction" to one of his most salient Vietnam traumas. He recognized that he tended to drink more and isolate more during these times. But he stated that he was gaining confidence in dealing with these episodes because he was able to anticipate them and had learned much about how to cope with them by being in therapy.

Psychometric measures. At Time Two, Mr. Z's Mississippi Scale and MMPI subscale were also below established cut-offs for PTSD. His Mississippi Scale went down substantially, although the MMPI subscale went up. This may reflect that Mr. Z was minimizing his symptoms at Time Two in order to appear to be functioning better. During debriefing after the Time Two assessment, Mr. Z reported that he had wanted to show us how he had improved during the interim since Time One. He reported that he did this as a way of thanking us for the services he received and letting us know that our services were well used and effective. Thus, we surmised that he probably under-endorsed on the Mississippi Scale, an instrument with high face validity. The MMPI subscale, showing an increase in symptomatology, is less obviously related to PTSD symptomatology, and is probably a more accurate indication of his symptoms at Time Two.

Points of Interest

What to measure. In this case, a focus on PTSD diagnosis or PTSD symptoms only would indicate that this veteran's functioning declined. Yet this veteran himself and most objective opinions of his overall functioning would indicate vast improvement in functioning. Thus it is important to note that PTSD symptoms may worsen, even when general functioning improves.

Substance use is the most likely explanation for the disparity between Mr. Z's overall functioning and the scores on the PTSD measures. He was self-medicating and suppressing his PTSD symptoms with opiates prior to Time One. Substance use disorders can often obscure the clinical picture in patients with PTSD, and the PTSD symptoms may not emerge until a substantial period of sobriety has been achieved. Psychoactive substance use may be so effective at "numbing" the symptoms of PTSD that they are undetectable to both the client and the clinicians working with him or her.

Consideration of the life context in which the index traumatic events take place is a vital part of a thorough PTSD evaluation. Coping strategies and other traumatic events were important factors affecting functioning in the case of Mr. Z. For the purposes of this evaluation, Mr. Z's post-trauma symptoms were indexed to his Vietnam experiences, but he also reported pre-military traumatic events that appeared to have affected his functioning and symptomatology as well. His experiences in Vietnam clearly exacerbated existing problems: he had begun to employ the maladaptive coping strategy of substance use prior to entry into the military, but his use increased dramatically in and after Vietnam. On the other hand, some of the positive coping strategies he maintains were also in place prior to his military service. His strong work ethic and the sense of esteem derived from work have helped him combat his PTSD symptoms.

How to measure. As stated above, it is extremely important to consider an individual's style of endorsement of symptoms in interpretation of psychometric results. Mr. Z's tendency to minimize his symptoms on the psychometrics at Time Two made it more difficult to discern how his symptoms had changed. Mr. Z's admission that he was minimizing his symptoms permitted a more accurate interpretation of the psychometric instruments.

When to measure. Mr. Z reported that he was not in the midst of one of his anniversary periods at the Time Two assessment. It is unclear whether or not he was experiencing an anniversary reaction at Time One as this was not directly assessed. If important anniversaries had been assessed at Time One, it might have helped determine how representative his symptoms were at assessment. However, it is also quite likely that Mr. Z would have been unaware of his anniversary periods prior to therapy, and might not have been able to provide accurate information about them.

Summary

Understanding what, how, and when to measure PTSD is critical in order to accurately assess progression, outcome, or remission of this disorder. The diagnosis of PTSD alone is insufficient to reflect the subtleties of this multifaceted problem. Multimodal assessments at multiple points in time are needed in order to understand the various components of an individual's manifestation of PTSD symptoms.

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NEW DIRECTIONS

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Many of you have been working with trauma survivors for a long time. Those of us who cut our professional teeth in the VA health care system during the 1970s have now been treating veterans with war-zone-related PTSD for more than two decades. Remarkable advances have been made during this time. PTSD was first recognized as a diagnosis in the DSM-III in 1980. Clinical programs in VA Medical Centers, Vet Centers, military front echelon units, civilian rape crisis centers, civilian inpatient/outpatient programs, and most disaster relief settings have multiplied to such an extent that they have become a hard-wired component of many comprehensive health care systems. Research on traumatic stress has shown that fundamental psychological and neurobiological systems are altered in PTSD and brain imaging studies have provided preliminary data suggesting that basic cognitive operations such as perception, learning and memory may be different in people with PTSD. Finally, PTSD is no longer invisible to the lay public or to the media who serve them. Thoughtful articles and broadcasts on the consequences of trauma appear with regularity and are readily understood by a public that has grown increasingly sophisticated in this regard.

As we take stock of all this remarkable progress, it is easy to forget how much farther we need to go. HMO-driven changes in American health care have shrunk the 7% allocated to mental health in the late 1980s to 3.5% in 1996. Comprehensive health care legislation initiatives introduced into the US Congress have frequently treated mental health benefits as a lower priority than medical/surgical coverage. This has been possible because of the continuing stigma that undervalues mental health treatment in contrast to "real medical" (e.g., medical/surgical) programs. Indeed, the recent congressional effort to obtain "parity" for mental health benefits was necessitated because HMOs and insurance companies had consistently short-changed mental health benefits and because the social and political climate had enabled them to get away with such a policy for years.

My concern is that as needed cost-effective measures are instituted in an era of government downsizing and shrinking resources, mental health programs will not have an equal opportunity to make their case. There may not be a level playing field on which mental health can compete with medicine, surgery, radiology, etc. for it's fair share of the health care dollar. With respect to PTSD, it appears to be a particularly dangerous time for such a young field to try to establish its niche in the spectrum of essential health care programs. There is still a myth in many circles that PTSD is just about Vietnam veterans and that they've already had their share of resources. This myth is perpetuated by people who do not know or refuse to acknowledge that PTSD is a major public health problem that affects 10% of all American women and 5% of all American men. Perpetuation of this myth threatens to suppress the growth of the trauma field prematurely, thereby depriving millions of military, veteran and civilian individuals of the preventive and therapeutic advances that finally seem within our grasp.

We cannot continue to conduct clinical business as usual. We cannot assume that influential people will notice and want to preserve either the excellent clinical care we provide our patients with PTSD or the groundbreaking discoveries shown by research on the psychological and neurobiological consequences of traumatic stress. It is our job to help them see, understand, and appreciate all that we have accomplished in less than 20 short years. It is even more important that we help them see, understand, and appreciate all that has not been done and must yet be done if we are to realize the potential of our powerful new conceptual and clinical tools.

We are just beginning to test and refine cognitive-behavioral and other psychotherapeutic approaches, new drugs designed specifically for PTSD, strategies to identify risk-factors in PTSD-vulnerable people, preventive measures designed to reduce the deleterious impact of childhood trauma and domestic violence, and acute interventions to forestall the development of PTSD among military, police, emergency medical and disaster relief professionals, as well as among the survivors of war trauma, sexual assault, interpersonal/domestic/urban violence, motor vehicle accidents, and natural disasters. These efforts must not be curtailed. I think we all have an important opportunity and obligation to show people what we can do now and might accomplish in the future. It is a massive educational commitment that we dare not refuse to make. I hope you will join me in this effort.

WOMEN AND TRAUMA: A CLINICAL FORUM

Marylene Cloitre, Ph.D.

This issue's guest author is Karestan C. Koenen, a graduate student in the clinical psychology program at Boston University and a psychology fellow at the Payne Whitney Clinic of New York Hospital. She is currently principle investigator on a grant entitled "The Comorbidity of PTSD and Antisocial Personality Disorder" funded by the Department of Veteran's Affairs and a recipient of a National Research Service Award from NIH.

As a trainee, I have had the opportunity to work in several different settings that focus on treating and researching trauma and PTSD. During these experiences, other students and I would discuss issues we viewed as important in our training. In this column, I discuss several of the issues that have been raised by students. It is my hope these concerns will be considered by clinical training directors when planning and implementing their programs.

1. How might trauma impact a therapist?

"I went to a party last night and someone asked me what I do for a living. When I told her I treated women sexually abused as children, she said, 'That's terrible. Why would you want to do something so depressing?' and then she walked away." -Psychology Intern

In this example, the intern encounters what might be the conventional wisdom about the risks of "getting to close" to another person's suffering and perhaps senses the social isolation associated with being perceived as a contagion. Working with traumatized individuals can even leave a therapist feeling alone, disillusioned, and frightened. Several authors have explained these types of reactions as an effect of secondary exposure or vicarious traumatization. Such traumatization is evident when a therapist caring for a victim of crime, sexual abuse, disaster, or combat develops a post-traumatic like reaction from hearing about the traumatic incident and seeing its effect on their patient (1-5).

I have had heard many clinical and research trainees talk about having been surprised by their intense emotional reactions after vicarious exposure to traumatic material. It is not uncommon to hear descriptions about having become hypervigilent and anxious, or about experiencing mild sleep difficulties and feelings of anger about the injustices in the world. Some students describe functional difficulties, such as withdrawing socially from their peers. They noted that the people whom they typically depend on for support were unable to understand the difficulties associated with working with traumatized clients.

However, students whose supervisors prepared them for the possible difficulties of working with traumatized individuals report greater confidence and ability to maintain emotional equilibrium. This preparation included helping them anticipate possible reactions before meeting with clients, having regular post-intervention discussions of the traumatic material with the supervisor, and ongoing clinical supervision. The scope of such supervision could additionally benefit research technicians and assistants who interview patients or who are involved with the transcription of trauma narratives recorded on audio/video tapes for research projects.

Throughout my training, I have sought the advice and wisdom from various senior clinicians about the challenges of working with trauma survivors. From them I have learned the importance of being very attentive to my appointment schedule. Toward this end, I have seen the importance of not clustering multiple appointments together without giving myself time to relax, debrief with others, or take a walk in between client meetings. I have also come to value maintaining a healthy lifestyle through diet, exercise, and enjoyable activities.

The most important piece of advice I received is learning to monitor and appreciate my limitations. As a trainee, I know the many demands on my time that exist — dissertation, professional meetings, social obligations, etc. If I begin to feel overwhelmed while treating clients, I know that I must make some adjustments so that I can be more emotionally available for my patients. Finally, I have come to realize that the social support I receive from other trainees in the field is essential. As student coordinator for the International Society for Traumatic Stress Studies (ISTSS), I try to encourage other trainees to seek support from their peer groups. Student members of ISTSS now routinely use email as one source of support with other students they have met at conferences or through our directory to feel connected to a larger network of trainees.

2. Avoiding talking about the trauma

"She first said she sought treatment because of symptoms related to having been raped but she hasn't brought it up since our first session. Maybe she's not ready to talk about it. I don't want to pressure her."- Practicum student

For both the client and the therapist, talking in detail about the traumatic experience can be difficult and painful. As a result, both parties may have a vested interest in avoiding a direct processing of the trauma. Trainee/ therapists may avoid encouraging patients to discuss their trauma for fear that they may cause patients additional pain or harm; therapists may also fear that discussing trauma could heighten their own feelings of vulnerability. My biggest fear when I began clinical training was that if my client talked about her rape, I might feel overwhelmed and out of control. During the course of individual and group supervision, I had opportunities to discuss my avoidance. These were helpful forums to disclose my fears and hear from other trainees about their hesitations and struggles. By the time I started training in longer-term, non-crisis oriented treatment, I no longer felt afraid of the traumatic material. I had learned techniques that provide a rationale to encourage clients to talk about their traumatic experiences.

3. Training in Empirically-Supported Treatments: Exposure Therapy

"I'm not sure why I should encourage him to talk about his combat experiences when it seems to get him so upset and makes him more symptomatic than when we started." -Psychology Intern

Although research on psychological treatments for PTSD is still in the early stages, reviews of the outcome literature support the efficacy of several psychological treatments (e.g., 6-7). These overviews of treatment efficacy support the use of treatments with a direct exposure component, such as flooding (8), prolonged exposure (PE; 9), and cognitive processing therapy (CPT; 10). Although I had originally been trained in a psychodynamic orientation, I found these behavioral techniques offered me both a structured, systematic way to help my patients process the traumatic material and a clear explanation of the rationale. Instead of inadvertently colluding with a client to avoid traumatic material, I learned to present the reasons for an exposure-based treatment and to negotiate a clear plan of action. Most importantly, learning exposure techniques whose efficacy is supported by empirical research and senior trauma clinicians gave me the confidence that, despite the pain, directly processing the traumatic material was therapeutic.

The topic of empirically-supported treatments also raises the issue of the need for students to be educated about the current state of research in the trauma field. Although the state of research on trauma and PTSD has made great advances in a short period of time, there are a minority of researchers who make fantastic claims with little data to back them up. Students need to be critically informed consumers of research so they are able to identify those reliable findings to guide their clinical treatment and research efforts.

In summary, learning how to manage the unique difficulties when working with traumatized individuals, to avoid collusive hesitation to directly process the traumatic material, and to employ empirically supported treatment are three important areas to consider during training. Attending to these issues will hopefully make a more positive training experience for both trainees and supervisors and help to create a new generation of quality trauma researchers and clinicians.

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Treatment of PTSD with Psychotic Symptoms

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Clinicians and researchers have acknowledged that thorough evaluation of comorbid psychiatric diagnoses is critical to providing appropriate treatment to individuals suffering from PTSD (1, 2). It is well documented that PTSD is associated with high rates of comorbid mood, substance-related, and other anxiety disorders (3-6). However, there have been few systematic attempts to examine the co-occurrence of psychotic symptoms in individuals with PTSD. Consequently, data regarding comorbidity rates between PTSD and psychotic disorders or mood disorder with psychotic features are limited.

Epidemiological studies of PTSD conducted by Helzer, Robbins, and McEvoy (7), Kulka et al. (8), and Kessler et al. (9) did not assess for psychotic disorders. However, a community-based epidemiological investigation conducted by Davidson, Hughes, Blazer, & George (10) reported that 10.9% of individuals diagnosed with PTSD also met criteria for schizophrenia or schizophreniform disorder. Additionally, a review of clinical investigations that evaluated psychotic symptoms in treatment-seeking PTSD populations revealed comorbidity rates between 28-35% (11-14), and findings of a recent investigation by Mueser et al. (15) indicate that there is a high rate of undiagnosed PTSD in individuals with severe mental illness. Although there has been a lack of attention to assessing rates of affective and nonaffective psychotic disorders in PTSD, preliminary data suggest that there may be a significant co-occurrence of psychotic symptoms with PTSD.

Our team at the New Orleans VA Medical Center recently conducted a study investigating the clinical impact of psychotic symptoms in individuals suffering from PTSD (16). The research compared functioning of three groups of veterans: one diagnosed with both PTSD and a comorbid psychotic disorder, a PTSD group without psychosis, and a group with only a psychotic disorder. Subjects were assigned DSM-IV diagnoses (17) on the basis of Structured Clinical Interview for DSM-IV (SCID) evaluations (18). Results revealed that the PTSD/psychosis group demonstrated a significantly greater degree of general psychopathology, positive psychotic symptoms, and paranoid thinking than the other two groups. While the PTSD/Psychosis group showed significantly higher levels of psychotic symptoms and aggression than the PTSD group, the two groups did not show significant differences in intensity of PTSD symptoms. These data are consistent with our clinical observations that PTSD symptoms may exacerbate psychotic symptoms and paranoid thoughts of some PTSD patients, and these symptoms can stimulate aggressive feelings and behaviors. These data also suggest that as many as 35% of treatment seeking veterans with PTSD may also experience psychotic symptoms that are distinct from PTSD-related perceptual disturbances (e.g., flashbacks, trauma-specific hallucinations, dissociation), and this population represents a group of trauma survivors with significant vulnerabilities and unique clinical needs.

Individuals with PTSD and psychotic symptoms frequently have been deemed inappropriate for traditional PTSD treatment programs because of a vulnerability to psychotic decompensation, and PTSD typically is not addressed within programs geared toward treatment of individuals suffering from psychotic disorders. Moreover, psychotic PTSD veterans often relate that they feel they have nothing in common with veterans diagnosed with psychotic disorders who did not serve in combat. Staff of clinical programs for treatment of individuals suffering from psychosis, in addition, may be reluctant to treat psychotic PTSD veterans because of the population's propensity toward agitation and aggression. Hence, opportunities for this group of veterans to receive treatment for PTSD symptoms have been limited. Our clinical observations suggest that because of this "lack of fit," the distinct needs of these veterans have gone largely unmet. Given this set of circumstances, it appears that many of the most severely ill PTSD veterans have not received adequate treatment for debilitating PTSD-related symptomatology and, generally, have been grossly underserved by the prevailing mental health system.

The PTSD Day Hospital Program at the New Orleans VA Medical Center was designed specifically to address the

therapeutic needs of this clinically challenging population of trauma survivors. Veterans are referred to the program by local PTSD clinicians. Prior to admission, veterans undergo comprehensive screening and evaluation to determine if they are appropriate for the program. A critical task of the psychological evaluation is to determine whether the cognitive disturbance experienced by the veteran reflects the presence of PTSD, a psychotic disorder, or a dissociative disorder. Veterans complete self report measures that evaluate PTSD, impulsive aggression, positive and negative symptoms of psychosis, and general psychopathology. The SCID is employed to derive DSM-IV diagnoses (17, 18). SCID interviews are conducted by experienced clinicians who carefully differentiate among PTSD-related perceptual disturbances, psychotic symptoms, and dissociative disorders. Veterans admitted to the Program meet criteria for both combat-related PTSD and a comorbid psychotic disorder or mood disorder with psychotic features. Veterans are excluded from the Program if assessment results reveal that they meet criteria for a current substance-related disorder, have a history of medication noncompliance, are unable to tolerate a group setting, or have experienced an episode of violence within one month of screening. Veterans are also excluded if they refuse to sign a behavioral contact that identifies clinical objectives that the veteran and staff agree to work toward and specifies conditions for participation in the program. Specifically, veterans who become members of the PTSD Day Program agree to refrain from alcohol and drug use, to take medications as prescribed, and to control aggressive behavior. Veterans who meet all requirements are assigned to a case manager and admitted for a six week probationary period, during which program compliance is monitored carefully. Veterans who are not accepted into the program or who do not pass the probation period are referred elsewhere in the PTSD program for treatment, e.g., followed individually by a case manager.

The three day a week PTSD Day Hospital Program began in September 1996. Participation generally ranges from 15 to 20 male Vietnam veterans. Approximately two-thirds of PTSD Day Program members suffer from a comorbid psychotic affective disorder (major depression with psychotic features, schizoaffective disorder) while the remaining one-third meet DSM-IV criteria for either schizophrenia or psychotic disorder not otherwise specified (NOS). All of these veterans have experienced chronic psychotic symptoms since their mid-twenties.

Stabilization is the initial goal of the program. Upon admission, members undergo medication adjustments as needed. Although antipsychotic agents are used rarely in PTSD treatment, Charney et al. (19) suggest that antipsychotic agents may alleviate certain symptoms. Additionally, Friedman (20) states that antipsychotic agents may be used in more severely affected PTSD patients with aggressive symptoms, such as, overwhelming anger, self-destructive behavior, or severe frequent flashbacks with hallucinations where other agents may be less effective. Because members of the program typically meet the criteria delineated by Friedman, most are maintained on antipsychotic agents. The usefulness of newer generation "novel" antipsychotic agents merits further investigation (21, 22). We are currently conducting a study to evaluate the efficacy of olanzapine, one of these novel antipsychotic agents, with PTSD veterans who experience psychotic symptoms.

The Program consists of a closely supervised social milieu and an intensive treatment regimen. An integral aspect of the Program is the therapeutic effect of the milieu. Weekly community meetings are held, and members are encouraged to manage the milieu through their own patient government. Because paranoid thoughts and suspiciousness amplify PTSD symptoms and stimulate aggression, it is essential to provide a therapeutic environment so that patients can feel safe and establish supportive relationships with other patients and staff. Prior to participating in potentially stressful treatment interventions, it is crucial for members to experience the milieu as a safe environment. Because most patients have a history of agitation and violent behavior, it is necessary to set limits against aggressive behavior in the milieu. This task is accomplished in as gentle and reassuring a manner as possible. Explicit rules are provided regarding types of angry and aggressive behaviors that are not permitted in the milieu, and, as stated, members agree to a behavioral contract that prohibits violence. The deleterious effects of violence on the individual and on the milieu as a whole are discussed. Consequently, the task of managing anger and agitation in the milieu becomes a community task in addition to an individual responsibility. For most of these patients, the milieu represents their first opportunity in many years to feel that they can experience mutually supportive social interactions with other human beings.

The intensive treatment program consists of group check in, psychoeducational group sessions targeting skills training and relapse prevention, and trauma focus group therapy. The treatment model was adapted from Carroll and Foy (1). Each session of the Program begins with a brief group check in where members report their current level of anxiety, agitation, and general psychological discomfort. A Subjective Units of Distress Scale (SUDS) provides a mechanism for members to report this self-assessment. Patients who report an exacerbation of psychotic symptoms during check in are referred to their case manager who evaluates the veteran's status, determines if he should be permitted to stay in the milieu that day, and assesses the need for revision of the veteran's treatment plan.

Specific topics are identified for each of the three weekly sessions. On Mondays, skills training groups are offered which focus on bolstering positive coping skills (e.g., thought stopping,

self-talk, seeking support), decreasing negative coping strategies (e.g., social isolation), teaching problem solving skills, and reducing social skills deficits. On Fridays, anger and agitation as well as substance abuse are targeted in a series of groups that focus on relapse prevention (23). Recreational activities, or "outings," are scheduled for the latter part of the Friday morning schedule. On Wednesdays, a series of groups focus specifically upon PTSD symptoms. These groups consist of graduated therapeutic exposure, cognitive restructuring, and relapse prevention. Patients must demonstrate that they have learned to use the coping skills that are taught in the Monday and Friday groups before they are allowed to participate in the graduated trauma exposure groups on Wednesday. Patients are also required to have formulated relapse prevention plans, and they must demonstrate the ability to implement these strategies prior to participating in the trauma focus group.

Preliminary research and clinical data indicate that individuals who meet criteria for PTSD and experience psychotic symptoms show significantly higher levels of cognitive, behavioral, and emotional disturbance than patients with PTSD without psychotic symptoms.

As noted in the literature (1, 24), many patients who experience psychotic symptoms in addition to PTSD are not good candidates for exposure-based therapy. Patients typically excluded from our Trauma Focus group suffer from a nonaffective psychotic disorder and show signs of severe thought disorder. We have observed that a majority of PTSD veterans with psychotic symptoms in the Day Program experience transient or no thought disorder and relatively few show first rank symptoms of schizophrenia (e.g., delusions of control, thought insertion). These patients usually meet criteria for major depression with mood-congruent psychotic features, schizoaffective disorder, or psychotic disorder NOS. These veterans typically experience a decrease in psychotic symptoms as coping skills improve, support increases, and stress and PTSD symptoms decrease. Many of these members improve to the point of being able to tolerate and benefit from the Trauma Focus group. As members move through the treatment process, they are observed closely and assessed for their ability to manage stress associated with trauma focus therapy. The treatment team determines a veteran's readiness to participate in the Trauma Focus group.

The Trauma Focus group provides an opportunity for members to discuss traumatic events and to participate in cognitive restructuring of negative beliefs about the trauma. The group format was modified from existing approaches to be sensitive to the needs of this population. When psychotic PTSD patients are entered into the weekly Trauma Focus group, a rationale for the treatment approach is provided (1). Members are encouraged to discuss a combat-related traumatic event that continues to trouble them. It is stressed that they have control over which trauma scene will be discussed. Veterans volunteer to speak, and no one is forced to discuss their trauma. SUDS ratings provide the mechanism by which veterans report level of anxiety, and the importance of monitoring anxiety during the session is stressed. It is critical to reintroduce war trauma gradually so that members do not experience anxiety of sufficient intensity to exacerbate psychotic symptoms. These Trauma Focus sessions differ from flooding procedures frequently used with PTSD patients in that exposure to traumatic material is gradual, and the goal is to keep anxiety at a moderate level throughout the session. That is, an important part of this treatment involves teaching the veteran to re-expose themselves gradually to war trauma at a pace and intensity that they can tolerate, while assuring that anxiety level, evaluated via SUDS ratings, remains manageable. Therapists must be carefully attuned to the anxiety of each patient so that the exposure sessions can be orchestrated to minimize risk of symptom exacerbation.

Trauma Focus work in the PTSD Day Program is accompanied by a relatively intensive cognitive restructuring component (1, 25). Often core beliefs and values are altered by trauma exposure (26), resulting in cognitive distortions regarding the traumatic event. Cognitive restructuring focuses on challenging and reframing the distorted trauma-related beliefs. The procedure requires the patient to identify and list negative cognitions about their war trauma. These negative cognitions and beliefs are written on a flip chart and then discussed and challenged by group members and facilitators. Members are then asked to formulate more adaptive and valid cognitions to replace negative ones. This exercise typically must be done repetitively over long periods of time in order for negative cognitions to be modified.

The Trauma Focus group is offered in the morning so that veterans have adequate time for anxiety to extinguish before the end of the session, and therapists are available for individual debriefing as needed. Immediately following these groups, patients are required to attend a Relapse Prevention group which focuses specifically upon control of PTSD-related symptoms stimulated by the exposure exercise. Patients are informed that a critical goal of Relapse Prevention is to learn self-control techniques so that they can regulate the intensity and duration of PTSD-related symptomatology. Accordingly, sessions stress the use of positive coping techniques, such as thought-stopping and self-talk.

The PTSD Day Program has been well received by

patients enrolled. Data from questionnaires administered to members to evaluate satisfaction with the Program indicate that most rated the Program as extremely therapeutic, and 70% of the patients reported that they feel greater control over PTSD symptoms than when they began the program. Additionally, these patients appear to experience considerable relief of PTSD and depressive symptoms in response to restructuring of relatively concrete aspects of their distorted trauma-related beliefs. Attendance has been extremely good, and only three patients have been removed from the Program because of aggressive behavior. Three members, or approximately 15%, have experienced adverse reactions to the Trauma Focus group. This represents a rate slightly lower than flooding complication rates of 25 - 30% reported by Foy et al. (27). Empirical studies designed to evaluate the efficacy of the program and its component parts are in progress.

In summary, preliminary research and clinical data indicate that individuals who meet criteria for PTSD and experience psychotic symptoms show significantly higher levels of cognitive, behavioral, and emotional disturbance than patients with PTSD without psychotic symptoms. Because these individuals exhibit severe psychopathology and present multiple therapeutic and management challenges, treatment resources traditionally have been limited. This article has described a nascent treatment program structured to address the special vulnerabilities of this complicated clinical population. The treatment intervention incorporates a therapeutic milieu, psychoeducational groups, and trauma focus group therapy. Although individuals with PTSD who experience psychotic symptoms are typically not deemed good candidates for trauma focus therapy, initial response to this treatment protocol by psychotic PTSD veterans has been promising.

These preliminary data argue for clinicians to consider applying a somewhat less conservative decision making bias when evaluating PTSD patients for trauma focus therapy. Such an approach would not automatically eliminate patients with psychotic symptoms, but would instead evaluate risks and benefits of employing this intervention with psychotic PTSD patients on a case by case basis. As indicated by Wahlberg (28), an overly conservative bias denies PTSD patients the opportunity to participate in an efficacious treatment intervention (29, 30) that allows them to confront negative trauma-related cognitions and to articulate the impact of traumatic experiences. Perhaps the same myths delineated by Foy (27) regarding the reluctance of trauma therapists to use exposure with ostensibly more stable PTSD groups applies to this group as well. That is, Foy suggests that unfounded fears of decompensation, unnecessary increases in distress, and depletion of emotional reserves deter trauma therapists from using exposure-based treatment techniques. An important caveat regarding conducting trauma focus therapy with psychotic PTSD patients warrants discussion. It is essential for therapists to have extensive experienced in working with both PTSD and psychotic disorders so that early signs of psychotic decompensation will be detected and appropriate actions can be implemented quickly to minimize risks to the patient and the milieu.

In conclusion, surprisingly little effort has been devoted to understanding the complex interplay between PTSD and psychotic symptoms. Further research is needed to bolster clinical efforts and to determine if exposure to extreme stress is associated with developing psychotic symptoms or if a predisposition to psychosis increases risk for developing PTSD following exposure to a traumatic event. Further research will shed light on disorder overlap and possibly have relevance for future revisions of PTSD diagnostic criteria.

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